





| Query Match           |  | Score   | DB ID                        | Length | Match      | SQ      | Sequence                    |
|-----------------------|--|---|------------------------------|--------|------------|---------|-----------------------------|
| Best Local Similarity |  | 100.0%  | Pred.                        | No.    | 1-4e-17;   |         | 9434, e-17, 1-4e-17, Ch-64, |
| Matches               |  | 30;   | Conservative                 | 0;     | Mismatches | 0;      | Indels                      |
| QY                    |  | 1   | GAYKTKAKKHLVACVCPVWVWVHFLASV | 30     |            |         |                             |
| DB                    |  | 124   | GAYKTKAKKHLVACVCPVWVWVHFLASV | 30     |            |         |                             |
| RESULT                |  | 2   |                              |        |            |         |                             |
| KNP-HORBU             |  |   | STANDARD:                    |        | PRT:       | 124 AA. |                             |
| AC                    |  | PO057;  |                              |        |            |         |                             |
| M                     |  | 21-JUL-1996 (Rev. 01, Created)  |                              |        |            |         |                             |
| B                     |  | 13-AUG-1987 (Rev. 05, Last sequence update)   |                              |        |            |         |                             |
| C                     |  | 20-DEC-2001 (Rev. 10, Last annotation update)   |                              |        |            |         |                             |
| D                     |  | RIBONUCLEASE_PANCREATIC (IC 6.1, 27.5) (RNASE 1) (RNASE A).   |                              |        |            |         |                             |
| E                     |  | GN  |                              |        |            |         |                             |
| F                     |  | (S) tuberculibabalis (Gastric water buffalo).   |                              |        |            |         |                             |
| G                     |  | Fukuyoshi, Mekada, Chordata, Craniata;Vertebrata, Euteleostomi; Mammalia; Eutheria; Chondrocrania; Ruminantia; Bovida; Bovidae; Bovinae; Bovinae; Bovidae.                        |                              |        |            |         |                             |
| H                     |  | (X) NCBITAXID:894627;   |                              |        |            |         |                             |
| I                     |  | KN  |                              |        |            |         |                             |
| J                     |  | KP: SEQUENCE.   |                              |        |            |         |                             |
| K                     |  | STRAIN=SWAMP_BREEF AND RIVER_BREEF;   |                              |        |            |         |                             |
| L                     |  | MEMLINE=90153263; PDBID:5A005;  |                              |        |            |         |                             |
| M                     |  | KA SIDIK A., Martella R., Bozzetta J.J.;  |                              |        |            |         |                             |
| N                     |  | *Amino acid sequence differences in pancreatic ribonucleases from water buffalo breeds (from Indonesia and Italy)." Biochem. Genet. 17:1151-1158(1979).                           |                              |        |            |         |                             |
| O                     |  | RP: SEQUENCE.   |                              |        |            |         |                             |
| P                     |  | RX: MEDLINE=90160925; PubMed=7353035;   |                              |        |            |         |                             |
| Q                     |  | RA Beintema, J.J.;  |                              |        |            |         |                             |
| R                     |  | *Primary structures of pancreatic ribonucleases from Bovidae. Impala, Thomson's gazelle, nilgai and water buffalo."   |                              |        |            |         |                             |
| S                     |  | RA: Blochim. Biophys. Acta 621:89-102(1980).  |                              |        |            |         |                             |
| T                     |  | CC -1- CATALYTIC ACTIVITY: ENDONUCLEOTIC CLEAVAGE TO 3'-PHOSPHOMONO-NUCLEOTIDES AND 3'-PHOSPHODIGUCOSE ENDING IN C-P OR G-P   |                              |        |            |         |                             |
| U                     |  | SEQUENCE.   |                              |        |            |         |                             |
| V                     |  | RX: STRAIN=SWAMP_BREEF, AND RIVER_BREEF;  |                              |        |            |         |                             |
| W                     |  | RA: MEDLINE=90160925; PubMed=7353035;   |                              |        |            |         |                             |
| X                     |  | CC -1- SUBCELLULAR LOCATION: SECRETED.  |                              |        |            |         |                             |
| Y                     |  | CC -1- TISSUE SPECIFICITY: PANCREAS.  |                              |        |            |         |                             |
| Z                     |  | -1- PIM: SWAMP_BREEF_RIBONUCLEASE DO NOT BIND CARBOHYDRATE, BUT THERE IS EVIDENCE OF POLYMORPHIC FORM THAT DOES.  |                              |        |            |         |                             |
| AA                    |  | -1- MISCELLANEOUS: THE SEQUENCE OF THE RIVER_BREEF (TAIWA) IS SHOWN, THE OTHER TYPE IS KNOWN AS SWAMP-TYPE (CHINESE A). SIMILARITY BELONGS TO THE PANCREATIC RIBONUCLEASE FAMILY. |                              |        |            |         |                             |
| AB                    |  | AC -1- SIMILARITY BELONGS TO THE PANCREATIC RIBONUCLEASE FAMILY.  |                              |        |            |         |                             |
| BC                    |  | AD PIR: A00805; NEWB: PIR: S08348; S08548; PIR: S08549; S08549; HSPP: P00656; ISSN: IPRINTER: IPR001427; RIBNASE.   |                              |        |            |         |                             |
| CD                    |  | AE PRINS: PH00794; RIBNASE: SMART: SM00122; RNASE_PANCREATIC.   |                              |        |            |         |                             |
| DE                    |  | AF PROJOM: PD00045; RNASE: SMART: SM00122; RIBNASE: RIBNASE.  |                              |        |            |         |                             |
| EF                    |  | AG PRINTER: PE00074; RIBNASE: PRINS: PH00794; RIBNASE.  |                              |        |            |         |                             |
| FG                    |  | AH PROJOM: PD00045; RNASE: SMART: SM00122; RIBNASE: RIBNASE.  |                              |        |            |         |                             |
| GH                    |  | AI PRINTER: PE00074; RIBNASE: PRINS: PH00794; RIBNASE.  |                              |        |            |         |                             |
| IJ                    |  | JK RIBNASE: Nuclelease_Ribonuclease; Glycoprotein.  |                              |        |            |         |                             |
| KL                    |  | LM DISULFID 26 BY SIMILARITY.   |                              |        |            |         |                             |
| LM                    |  | LN 40 BY SIMILARITY.  |                              |        |            |         |                             |
| MN                    |  | OP 58 BY SIMILARITY.  |                              |        |            |         |                             |
| NO                    |  | PT 65 BY SIMILARITY.  |                              |        |            |         |                             |
| PQ                    |  | RT 12 BY SIMILARITY.  |                              |        |            |         |                             |
| RS                    |  | ST 41 BY SIMILARITY.  |                              |        |            |         |                             |
| TU                    |  | WT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| UV                    |  | ZW 41 BY SIMILARITY.  |                              |        |            |         |                             |
| XY                    |  | AC 41 BY SIMILARITY.  |                              |        |            |         |                             |
| ZA                    |  | BT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| BC                    |  | CT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| DE                    |  | ET 41 BY SIMILARITY.  |                              |        |            |         |                             |
| FG                    |  | FT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| HI                    |  | GT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| JK                    |  | LT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| MN                    |  | NT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| PQ                    |  | RT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| RS                    |  | ST 41 BY SIMILARITY.  |                              |        |            |         |                             |
| TU                    |  | WT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| UV                    |  | AC 41 BY SIMILARITY.  |                              |        |            |         |                             |
| ZA                    |  | BT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| BC                    |  | CT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| DE                    |  | ET 41 BY SIMILARITY.  |                              |        |            |         |                             |
| FG                    |  | FT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| HI                    |  | GT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| JK                    |  | LT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| MN                    |  | NT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| PQ                    |  | RT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| RS                    |  | ST 41 BY SIMILARITY.  |                              |        |            |         |                             |
| TU                    |  | WT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| UV                    |  | AC 41 BY SIMILARITY.  |                              |        |            |         |                             |
| ZA                    |  | BT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| BC                    |  | CT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| DE                    |  | ET 41 BY SIMILARITY.  |                              |        |            |         |                             |
| FG                    |  | FT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| HI                    |  | GT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| JK                    |  | LT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| MN                    |  | NT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| PQ                    |  | RT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| RS                    |  | ST 41 BY SIMILARITY.  |                              |        |            |         |                             |
| TU                    |  | WT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| UV                    |  | AC 41 BY SIMILARITY.  |                              |        |            |         |                             |
| ZA                    |  | BT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| BC                    |  | CT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| DE                    |  | ET 41 BY SIMILARITY.  |                              |        |            |         |                             |
| FG                    |  | FT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| HI                    |  | GT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| JK                    |  | LT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| MN                    |  | NT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| PQ                    |  | RT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| RS                    |  | ST 41 BY SIMILARITY.  |                              |        |            |         |                             |
| TU                    |  | WT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| UV                    |  | AC 41 BY SIMILARITY.  |                              |        |            |         |                             |
| ZA                    |  | BT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| BC                    |  | CT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| DE                    |  | ET 41 BY SIMILARITY.  |                              |        |            |         |                             |
| FG                    |  | FT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| HI                    |  | GT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| JK                    |  | LT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| MN                    |  | NT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| PQ                    |  | RT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| RS                    |  | ST 41 BY SIMILARITY.  |                              |        |            |         |                             |
| TU                    |  | WT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| UV                    |  | AC 41 BY SIMILARITY.  |                              |        |            |         |                             |
| ZA                    |  | BT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| BC                    |  | CT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| DE                    |  | ET 41 BY SIMILARITY.  |                              |        |            |         |                             |
| FG                    |  | FT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| HI                    |  | GT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| JK                    |  | LT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| MN                    |  | NT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| PQ                    |  | RT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| RS                    |  | ST 41 BY SIMILARITY.  |                              |        |            |         |                             |
| TU                    |  | WT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| UV                    |  | AC 41 BY SIMILARITY.  |                              |        |            |         |                             |
| ZA                    |  | BT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| BC                    |  | CT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| DE                    |  | ET 41 BY SIMILARITY.  |                              |        |            |         |                             |
| FG                    |  | FT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| HI                    |  | GT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| JK                    |  | LT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| MN                    |  | NT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| PQ                    |  | RT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| RS                    |  | ST 41 BY SIMILARITY.  |                              |        |            |         |                             |
| TU                    |  | WT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| UV                    |  | AC 41 BY SIMILARITY.  |                              |        |            |         |                             |
| ZA                    |  | BT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| BC                    |  | CT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| DE                    |  | ET 41 BY SIMILARITY.  |                              |        |            |         |                             |
| FG                    |  | FT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| HI                    |  | GT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| JK                    |  | LT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| MN                    |  | NT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| PQ                    |  | RT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| RS                    |  | ST 41 BY SIMILARITY.  |                              |        |            |         |                             |
| TU                    |  | WT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| UV                    |  | AC 41 BY SIMILARITY.  |                              |        |            |         |                             |
| ZA                    |  | BT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| BC                    |  | CT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| DE                    |  | ET 41 BY SIMILARITY.  |                              |        |            |         |                             |
| FG                    |  | FT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| HI                    |  | GT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| JK                    |  | LT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| MN                    |  | NT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| PQ                    |  | RT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| RS                    |  | ST 41 BY SIMILARITY.  |                              |        |            |         |                             |
| TU                    |  | WT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| UV                    |  | AC 41 BY SIMILARITY.  |                              |        |            |         |                             |
| ZA                    |  | BT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| BC                    |  | CT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| DE                    |  | ET 41 BY SIMILARITY.  |                              |        |            |         |                             |
| FG                    |  | FT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| HI                    |  | GT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| JK                    |  | LT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| MN                    |  | NT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| PQ                    |  | RT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| RS                    |  | ST 41 BY SIMILARITY.  |                              |        |            |         |                             |
| TU                    |  | WT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| UV                    |  | AC 41 BY SIMILARITY.  |                              |        |            |         |                             |
| ZA                    |  | BT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| BC                    |  | CT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| DE                    |  | ET 41 BY SIMILARITY.  |                              |        |            |         |                             |
| FG                    |  | FT 41 BY SIMILARITY.  |                              |        |            |         |                             |
| HI                    |  | GT 41 BY SIMILARITY.  |                              |        |            |         |                             |







| Matches | 28. | Consideration                     | Q.  | Mispar. less | 2. | Indicates | Q. | Gaps |
|---------|-----|-----------------------------------|-----|--------------|----|-----------|----|------|
| QY      | 1   | TAYKTIQANRILIVACEENPYPVHFLASV     | 30  |              |    |           |    |      |
| 1b      | 95  | CAYEAVLAVGATLIVVAVLMLMIVV-VHFLASV | 124 |              |    |           |    |      |

Search completed: March 14, 2002, 17:45:02  
Job time: 653 sec

